



Summary of DNFSB Recommendation 95-2 Implementation Plans Actions

DNFSB Recommendation 95-2, submitted to the Department on October 11, 1995, seeks to combine and modify previous Board recommendations concerning the use of standards for conducting operations. The recommendation calls for: 1) an institutionalized process for ensuring environment, safety, and health requirements are met, 2) safety management plans for conduct of operations, tailored based upon risk, 3) a prioritized list of facilities/activities based on hazards and importance, 4) direction and guidance for the integrated safety management system, and 5) measures to ensure the Department has or will acquire the necessary technical expertise to effectively implement the process.

The Department's acceptance of Recommendation 95-2, as discussed in the Secretary's letter of January 17, 1996, is based on the premise that safety management must be integrated into management and work practices at all levels so that missions are accomplished and the public, the workers, and the environment are protected. Stated simply, the objective is to: **DO WORK SAFELY**.

Over the past 3 years, the Department has developed and implemented a number of systems that are designed to achieve an acceptable level of safety throughout Departmental operations. These initiatives, although not created with Recommendation 95-2 in mind do respond to many of the tenants of the Recommendation, are designed to achieve the following results:

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- enhance DOE's ability to plan and execute work, identify the hazards associated with specific operations and activities, and control or eliminate such hazards in an appropriate and cost-effective manner;
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- clarify DOE management's expectations for the work to be accomplished and the level of environment, safety and health protection to be established and to do so in a manner that is not overly prescriptive but allows contractors to exercise the best means of meeting these expectations;
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- establish clear roles and responsibilities for protection of environment, safety and health throughout the Department and our contractor corps;
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- shift the focus of attention from "paper requirements" and documentation to a disciplined, analytical and collaborative focus on work planning, hazards analysis and hazards control; and
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- establish analytical bases for setting risk-based management and project priorities.
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These initiatives combined with the safety management guiding principles of line management responsibility for safety, competence commensurate with responsi-

bilities, and establishment of an appropriate set of safety requirements reflect a strong commitment towards achieving the safety goals articulated in the Rec.

The execution of the implementation plan can be partitioned into five interrelated core safety management functions, namely:

- 1) define scope of work,
- 2) identify and analyze hazards associated with the work,
- 3) develop and implement hazard controls,
- 4) perform work within controls, and
- 5) provide feedback on adequacy of controls and continuous improvement in defining and planning work.

These five core safety management functions provide the necessary structure for any work activity that could potentially affect the safety of the public, the workers, and the environment. The degree of rigor needed to address these functions will vary based on the type of work activity and the hazards involved.

Most of the specific actions described in the Implementation Plan relate to integrating the Department's approach to safety management with the development of new directives and initiatives that will focus on:

- Institutionalizing through Department directives the Safety Management System, including establishment of the Department-wide safety management objective, guiding principles, and functions and establishment of guidance for tailoring the level of rigor based on hazard and work involved.

- Promulgating Department direction on Authorization Basis and Authorization Agreements.

- Identifying existing directives and ongoing Department initiatives involving safety management that need to be reconciled and integrated.

- Upgrading the Functions, Assignments, and Responsibilities Manual, consistent with the direction provided by the Safety Management System.

- Implementing a variety of activities to share, recruit/acquire and develop/train Department technical expertise for effectively implementing the Safety Management System.

At the Department field office/contractor level, several actions have been identified to begin complex-wide implementation. These include:

- Developing contractual mechanisms to implement the Department's Safety Management System into existing and future contracts.

- Kicking off the implementation at a short list of Department sites and facilities with a briefing to describe the approach and implementation schedule.

- Establishing criteria and methods for prioritizing implementation of the Safety Management System at remaining Department facilities and activities.

A Safety Management Project Team will be established to oversee the commitments and internal management actions outlined in this Implementation Plan. The project team will also follow the other relevant Department programs and initiatives for consistency with the safety management approach outlined in this plan. This dedicated project team will report directly to the Under Secretary.



Summary of EH D&D Technical Assistance Project

The primary focus of the EH D&D Technical Assistance Project (TAP) is to help ensure that public and worker safety and health (S&H) considerations are integrated into DOE D&D activities. For this EH initiative, the goal is to develop cost-effective approaches for integrating S&H into D&D project planning, execution, and performance monitoring activities. The focus is on cradle to grave project activities for D&D, as well as DOE's role of establishing S&H performance expectations and monitoring performance.

The TAP objective is to facilitate the development of an Integrated Safety and Health Management Framework (ISHMF). This "framework" includes the overall D&D project management approach, regulatory basis, performance monitoring and feedback processes. An ISHMF is supported at a given D&D project by the site's safety management systems, D&D project procedures, and project management/safety basis documentation.

The elements of the ISHMF include the typical safety and health programs/analyses/activities required by DOE safety and health requirements or contractors' operating procedures. They include activities such as hazard analysis, hazard classification, safety authorization basis, work control system, facility safety analysis, activity based safety analysis, and performance monitoring and feedback. Traditionally, at many sites these elements have been performed independently of each other (stovepiping), resulting in inconsistent or redundant S&H activities and a high cost of doing business. The ISHMF links these elements together at all levels of project activities. To ensure integration, several safety principles are fundamental to the ISHMF. They are graded hazard analysis, early participation of safety and health personnel during project planning, and use of multi-disciplined project teams, including D&D workers, to perform D&D project activities.

The objectives of the ISHMF are as follows:

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- Assuring that S&H considerations (i.e., hazards, risks) are an integral part of project planning decisions including establishing D&D end-state, selection of D&D technologies or cleanup methods, and development of project baseline schedule.
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- Utilizing S&H personnel and workers together with operations/project personnel to perform project planning, analysis and work control in the most feasible manner.
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- Assuring that *Necessary and Sufficient* S&H standards are identified and that this process reflects stakeholder interaction; that standards are translated into D&D project procedures; that consideration is given early in the project planning cycle on the facility staffing, expertise and funding required to implement these standards; and that standards are integrated into performance monitoring activities.

- Implementation of a hazards analysis process that: 1) provides information to establish overall D&D safety basis and is linked to project planning decisions on funding, management controls and D&D task scheduling, etc., 2) that is also tailored to support continuous application to specific D&D project tasks as detailed planning information evolves, 3) that involves workers in identifying hazards and adequacy of controls; and 4) that has specific mechanisms such as hazard screening to support grading of analysis commensurate with hazard severity and D&D task complexity.

- Building S&H cost-effectiveness criteria into performance monitoring including D&D project work control and feedback mechanisms. This includes having a change control process that is designed for simple application to D&D project tasks (i.e., simple screening) and having self-assessments (or other feedback mechanisms) in place that include criteria oriented toward cost-effective S&H (i.e., are project organizations working together and communicating at the right times during the project cycle, is analysis being accomplished in a graded manner, etc.).

To date, the ISHMF has been applied to the PUREX deactivation project with the following benefits:

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- reduction of project inefficiencies including redundant planning and analysis activities (e.g., various disciplines work together rather than in a vacuum),
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- reduction in unnecessary project safety documentation,
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- shortened more realistic project baseline schedules as a result of more up-front stakeholder involvement and improved efficiencies,
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- improved safety and health performance through enhanced identification of hazards and improved worker morale.
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Comparison of DNFSB Recommendation 95–2 Implementation Plan with EH D&D Technical Assistance Project

General Observations

Both the 95-2 Implementation Plan (IP) and the EH D&D Technical Assistance Project (TAP) strive for an integrated, nonredundant, cost-effective authorization basis. However, the scope of the TAP is public and worker safety and health issues in the context of D&D; whereas, the IP is broader to include concerns as they impact all DOE activities, including D&D.

Therefore, for D&D activities, the TAP does encompass the goals of the IP. Specifically both paradigms invoke:

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- defining a practicable scope of work,
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- identifying and analyzing hazards in a rigorous and formal manner
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- developing and implementing the necessary hazard controls,
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- performing authorized activities within the bounds and specifications of the analysis, and
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- evaluating specified hazard controls through performance monitoring and measurements so that continuous improvement can be attained.
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Detailed Comparison

The following tables provide a detailed comparison of the elements of the IP with those of the TAP.



IP	TAP	Remarks
Assurance that the overall management of safety functions and activities became an integral part of DOE's business process.	The TAP endorses the application of an Integrated Safety and Health Management Framework (ISHMF) that includes safety and health professionals involvement early in the planning process and throughout the activity.	The TAP is responsive to this tenant of the IP for D&D activities.
Development of an approach for tailoring safety requirements appropriate to the work and the hazards.	The ISHMF endorses the use of the "graded approach" which allows for an appropriate determination of controls and documentation commensurate with hazard types and work activity complexity.	The TAP is responsive to this tenant of the IP for D&D activities.
Recognition that many existing programs and initiatives related to safety management must be reconciled and brought into a coherent, appropriate, integrated system.	The ISHMF endorses reduction and minimization of duplicative efforts during project safety and health documentation development.	The TAP is responsive to this tenant of the IP for D&D activities.
Establishment of a corporate safety management system whose focus is effective hazard identification and control, and which will readily facilitate: establishment of balanced priorities, allocation of resources based on work and associated hazards, and translation of lessons learned managing one hazard type for the benefit of managing other hazard types.	<p>The TAP endorses the application of an ISHMF that encompasses all sources of hazards to the public, workers, and the environment participating in D&D activities.</p> <p>To date, the TAP has published DOE/EH-0486 "Integrating Safety and Health During Deactivation with Lessons Learned from PUREX" 9/29/95. This document facilitates the transfer of information learned from the PUREX deactivation to other similar activities.</p>	The TAP is responsive to this tenant of the IP for D&D activities.

Comparison

IP	TAP	Remarks
Establishment of clear roles and responsibilities for safety management that provide for ownership and assurance of safety.	The ISHMF calls for stipulating hazard controls for each hazard present during a specific D&D activity. The organizations responsible for hazard control are identified.	The TAP is responsive to this tenant of the IP for specific D&D activities.
Assurance that assigned responsibilities and personnel competence are properly aligned for effectively implementing safety management systems.	The TAP does not address training.	This tenant of the IP is beyond the TAP scope.
Commitment 1.1: Issue Department policy and notice to define and institutionalize the Department's Safety Management System, including the safety management objectives, guiding principles, and functions defined by this Implementation Plan.	The TAP long term objective is to develop a DOE-wide standardized approach to integrating health and safety considerations into D&D activity planning.	For D&D activities the TAP will be responsive to the IP upon issuance of the standardized approach.
Commitment 1.2: Issue draft Department Manual to implement the Department's Safety Management System described in the policy and notice (Commitment 1.1).	To date the TAP has published DOE/EH-0486 "Integrating Safety and Health During Deactivation with Lessons Learned From PUREX" 9/29/95 which activates the ISHMF.	The TAP is responsive to this tenant of the IP for D&D activities.
Commitment 2.1: Develop guidance for tailoring the level of rigor necessary for performance of work for facilities and activities.	The TAP endorses application of the "graded approach," and addresses how this can be applied to specific D&D tasks.	The TAP is responsive to this tenant of the IP for D&D activities.
Commitment 3.1: For each major DOE facility provide a description of the approach and schedule for implementation of the Safety Management System.	At present, the TAP does not include the major facilities specified in the IP. Demonstration projects are being conducted at other facilities at SRS, Hanford, Idaho, Oak Ridge, and Fernald.	This tenant of the IP is beyond the TAP scope.

IP	TAP	Remarks
<p>Commitment 4.1:</p> <p>Update and reconcile the Department roles and responsibilities in the FAR Manual to be consistent with the Department's policy and notice on the Safety Management System (Commitment 1.1).</p>	<p>The TAP does not encompass the DOE FAR Manual.</p>	<p>This tenant of the IP is beyond the TAP scope. However, the TAP does address S&H roles and responsibilities for D&D project teams.</p>
<p>Commitment 4.2:</p> <p>Develop and issue for use contract clauses requiring contractors to follow the safety management objectives, guiding principles, and functions that are defined in the policy notice (Commitment 1.1) and to describe the contractor's approach to implementing and tailoring the Safety Management System to their sites/facilities/activities.</p>	<p>The TAP supports contract reform goals through the establishment of S&H performance expectations for D&D.</p>	<p>The TAP is responsive to this tenant of the IP for specific D&D activities.</p>
<p>Commitment 5.1:</p> <p>Outline a Department approach for improving the technical expertise/competence necessary to implement the Safety Management System. Aspects will include: identification of deficiencies; use of Excepted Service Authority to supplement areas of technical deficiencies; training and qualification programs to develop expertise; and revisions, as necessary, to the qualification standards for the Department qualification program.</p>	<p>The TAP does not encompass personnel competency, training and qualifications.</p>	<p>This tenant of the IP is beyond the TAP scope.</p>

IP	TAP	Remarks
<p>Commitment 5.2:</p> <p>Establish a Department of Energy core technical group database to ensure effective identification and utilization of the Department's technical expertise.</p>	<p>The TAP does identify and evaluate lessons learned from implementing the ISHMF for D&D activities. To date lessons learned from the deactivation of the PUREX facility have been published (DOE/EH-0486).</p>	<p>The TAP does respond to this tenant of the IP for D&D activities.</p>
<p>Action 1.a:</p> <p>Establish a Safety Management Project Team to oversee commitments and internal management actions outlined in this Implementation Plan. The project team will also follow other relevant Department programs and initiatives for consistency with the Recommendation 95-2 Implementation Plan approach.</p>	<p>The TAP does not monitor the implementation of the IP.</p>	<p>This tenant of the IP is beyond the TAP scope.</p>
<p>Action 1.b:</p> <p>Identify and then establish a Department-wide process for reconciling and integrating existing directives and ongoing initiatives with the Safety Management System.</p>	<p>The TAP integrates DOE directives and initiatives that are applicable to worker safety for D&D activities.</p>	<p>The TAP does respond to this tenant of the IP for D&D activities.</p>
<p>Action 3.a:</p> <p>Prepare guidance and criteria on prioritizing implementation of the Safety Management System at Department facilities and activities.</p>	<p>The TAP long term objective is to develop a DOE-wide standardized approach to integrating health and safety considerations into D&D activity planning.</p>	<p>For D&D activities the TAP will be responsive to the IP upon issuance of the standardized approach.</p>

IP	TAP	Remarks
<p>Action 3.b:</p> <p>Prepare Under Secretary guidance to be promulgated to the Heads of Department Program Elements for establishing out year budget priorities for implementing the Safety Management System (using the criteria developed in Action 3.1).</p>	<p>Preparation of this guidance is beyond the scope of the TAP.</p>	<p>This tenant of the IP is beyond the TAP scope.</p>
<p>Action 5.a:</p> <p>Develop and present an awareness briefing for the department and contractor management at the priority facilities and activities regarding implementation of safety management systems.</p>	<p>Preparation of this briefing is beyond the scope of the TAP.</p>	<p>This tenant of the IP is beyond the TAP scope.</p>
<p>Action 5.b:</p> <p>Develop a training course to be made available for complex-wide training on integrated safety management.</p>	<p>Preparation of this training course is beyond the scope of the TAP.</p>	<p>This tenant of the IP is beyond the TAP scope.</p>